

REMARKS

Reconsideration of this application is respectfully requested.

In applicant's invention, the amount of fuel that is consumed in a combustion chamber is reduced by raising the combustion temperature in the combustion chamber. Applicant's claim requires that the temperature rise be accomplished by providing means for reducing the air pressure in the combustion equipment of an internal combustion engine.

The examiner rejected applicant's claim under 35 USC § 102(b) for anticipation based on U.S. patent 3,957,418 to Sata. The examiner refers to a pressure release valve 18 in an exhaust gas cleaning tank 9 of Sata. However, the pressure release valve 18 is a safety device that functions only when pressure within the cleaning tank 9 exceeds atmospheric pressure. The valve 18 then opens automatically against the force of a spring by the pressure of the gases contained within the cleaning tank. The pressure release valve 18 thus allows a portion of the exhaust gases within the cleaning tank 9 to escape into the ambient atmosphere until the pressure within the cleaning tank 9 returns to approximately one atmosphere. The pressure release valve 18 then automatically closes by the return action of the spring, which provides a force that overcomes pressure that is at or below one atmosphere.

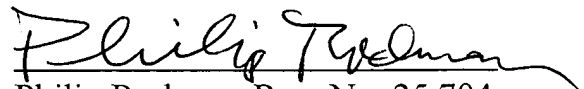
Thus Sata provides not only a combustion chamber 2, but also an exhaust gas cleaning tank 9. It is apparent that Sata's intent is to reproduce or regenerate fuel from exhaust gas passing out of a fuel combustion chamber. Sata

feeds the exhaust gas into the exhaust gas cleaning tank to extract any fuel that may be mixed in with the exhaust gas. The extracted or regenerated fuel is circulated back into the combustion chamber 2 by way of a fuel recirculation duct 7. Thus Sata does not provide means for reducing air pressure in combustion equipment of an internal combustion engine as defined in applicant's claim 1.

It should be noted that in accordance with applicant's invention as claimed in claim 1, there is a continuous saving of fuel during combustion from the very beginning of the combustion process. In comparison, Sata recycles the exhaust gas to extract fuel that may or may not be present within the exhaust gas. Furthermore, since Sata's pressure release valve functions only to keep the air pressure inside the exhaust cleaning tank 9 at one atmosphere. Sata has nothing to do with reducing air pressure in a combustion equipment to raise the temperature within the combustion chamber as claimed in claim 1. Thus, Sata's pressure release valve can never raise combustion temperature as required by applicant's claim 1.

In view of the foregoing remarks, it is submitted that this application is in condition for allowance and allowance thereof is respectfully requested.

Respectfully submitted,


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